Before the
U.S. Copyright Office, Library of Congress
Washington, DC

In the Matter of **Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies**	))))	Docket No. 2014–07

Long Form Comment
Proposed Class 9: Literary Works Distributed Electronically – Assistive Technologies

of

American Foundation for the Blind (AFB)
American Council of the Blind (ACB)
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2. *Proposed Class Addressed:* Class 9: Literary Works Distributed Electronically—Assistive Technologies

This comment seeks renewal of the exemption previously granted by the Librarian of Congress in the 2012 triennial review, which allows people who are blind, visually impaired, or print disabled, as well as the authorized entities that serve them, to circumvent technological protection measures ("TPMs") that prevent or interfere with the use of assistive technologies with electronically distributed literary works ("e-books").[1] Specifically, the previously granted exemption covers:

> Literary works, distributed electronically, that are protected by technological measures which either prevent the enabling of read-aloud functionality or interfere with screen readers or other applications or assistive technologies in the following instances: (i) [w]hen a copy of such work is lawfully obtained by a blind or other person with a disability, as such a person is defined in 17 U.S.C. 121; provided, however, the rights owner is remunerated, as appropriate, for the price of the mainstream copy of the work as made available to the general public through customary channels; or (ii) [w]hen such work is a nondramatic literary work, lawfully obtained and used by an authorized entity pursuant to 17 U.S.C. 121.[2]

The previously granted exemption contains two equally vital parts. The first part of the exemption covers e-books and other literary works which the consumer who is blind, visually impaired, or print disabled has purchased for themselves in the traditional marketplace but, because of TPMs, is not able to access through their customary adaptive technologies. The second part of the exemption tracks the language of the Chafee Amendment in allowing authorized entities, such as libraries and university disability service offices, to circumvent TPMs on e-textbooks, PDFs, and similar works in order to make those works accessible to the people they serve who are blind, visually impaired, and print disabled.

3. *Brief Overview of Proposed Exemption:* E-book Accessibility for People who are Blind, Visually Impaired, or Print Disabled

The American Foundation for the Blind (AFB) continues the efforts of its founder, Helen Keller, by working to remove barriers, create solutions, and expand possibilities for people with vision loss. The American Council of the Blind (ACB) works with industries, governments, and

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[1] *Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies*, 77 Fed. Reg. 65,260, 65,262 (Oct. 26, 2012) (codified at 37 C.F. R. § 201.40(b)(1)).
[2] *Id.*

other non-profit organizations in order to develop and maintain policies and systems that best provide equal opportunities for people who are blind. The Library Copyright Alliance (LCA) consists of three major library associations—the American Library Association (ALA), the Association of College and Research Libraries (ACRL), and the Association of Research Libraries (ARL)—that collectively represent over 100,000 libraries in the United States. Libraries provide services to visually impaired people, both inside and outside of educational settings, in particular by converting works into formats accessible to the print disabled. The student attorneys at the Samuelson-Glushko Technology & Policy Law Clinic (TLPC) at Colorado Law advocate for the public interest in important public policy and legal matters with technological dimensions.

We seek renewal of the current exemption allowing people who are blind, visually impaired, or print disabled—and the authorized entities that serve them—to convert inaccessible copyrighted works into an accessible and useable format. These comments seek to address the questions raised in the *NPRM* regarding the necessity for continuing the current exemption.[3] Although some improvements in accessibility have been made since the last triennial review, TPMs continue to effectively control accessibility technology's access to many e-books and other electronically distributed literary works.

The adverse effects of TPMs on people who are blind, visually impaired, or print disabled is clearly demonstrated by surveys of e-books available for purchase, data reflecting current implementation of accessibility-focused e-book standards, the user experience of students who are blind, visually impaired, or print disabled, and the use of the current exemption by libraries and university disability services. Converting inaccessible copyrighted works into accessible and useable formats is widely recognized as a noninfringing use. Copyright holders generally do not oppose creating accessible versions for use by people who are blind, visually impaired, or print disabled, and this exemption, a version of which has been granted for the past four rule-makings, has caused no apparent negative effects on the market for e-books. To the contrary, renewing this exemption will make it possible for people who are blind, visually impaired, or print disabled to participate in and help to grow the market for e-books. Finally, the World Intellectual Property Organization (WIPO) recently adopted the Marrakesh Treaty to Facilitate Access to Published Works by Visually Impaired Persons and Persons with Print Disabilities. Renewing the exemption is required to bring the United States into compliance with the Marrakesh Treaty.

This evidence, along with the statutory factors, weighs heavily in favor of renewing the 2012 exemption allowing for circumvention in the case of electronically distributed literary works protected by TPMs. These TPMs interfere with assistive technologies used by people who are blind, visually impaired, or print disabled to read those books.

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[3] *See Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies*, Notice of Proposed Rulemaking, 79 Fed. Reg. 73,863 (Dec. 12, 2014) ("*2014 NPRM*").

4. *Technological Protection Measures and Methods of Circumvention*: TPMs in e-books that Interfere with Assistive Technologies

Almost every e-book includes some form of TPM; many of these TPMs affect the use of adaptive technologies. Adaptive technologies include text-to-speech software programs, refreshable braille displays, and screen magnification systems. These adaptive technologies require access to the e-book in order to effectively "translate" the written information into a format usable by a reader who is blind, visually impaired, or print disabled. Any of these TPMs can effectively control access to the e-book which is needed for adaptive technologies to function properly.

A. TPMs control access to e-books by accessibility software.

E-book TPMs fall into three broad categories: trusted player encryptions, anti-copying encryptions, and access control encryptions. Each of these categories likely constitute "technological measure[s] that effectively contro[l] access to a work" under the meaning of Section 1201(a)(1).[4]

Each of the three leading e-book distributors—Amazon, Barnes and Noble, and Apple—employ TPMs from the three major categories. In addition, similar TPMs are used by textbook publishers, academic journals, and independent publishers. TPMs can "affect [accessibility] greatly" and, in some cases, TPMs applied to an otherwise completely accessible e-book can "render the content completely inaccessible."[5]

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[4] *See* 17 U.S.C. 1201(a)(1). The *2014 NPRM* asks "to what extent . . . . 'anti-copying encryptions' can be described as access controls within the meaning of 1201(a)(1)." 79 Fed. Reg. at 73,863. While anti-copying encryptions are primarily designed to prevent unauthorized copying of a digital work, in practice they also serve to control access under the meaning of Section 1201(a)(1). In other words, a copyright holder who intends to control copying in many cases will control access. Most copy controls that block the functionality of accessibility hardware and software "effectively control access" to the work and need to be circumvented by people who are blind, visually impaired, or print disabled in order for their assistive technologies to function properly. In addition, the use of copy and access controls together creates a legal gray area where it is often unclear if the circumvention needed for accessibility technology to work correctly is permitted or not under Section 1201. *See, e.g.,* Mary Case, et al., *Report of the ARL Joint Task Force on Services to Patrons with Print Disabilities* 28, 35 (Nov. 2, 2012), http://www.arl.org/storage/documents/publications/print-disabilities-tfreport02nov12.pdf; Chris Danielsen, *Design and Public Policy Considerations for Accessible E-Book Readers,* 18 Interactions 1 at 68 (2011).

[5] Sarah Hilderley, *Accessible Publishing Best Practice Guidelines for Publishers* 8 (Version 4, May 2013) *available at* http://www.accessiblebooksconsortium.org/export/sites/visionip/inclusive_publishing/en/pdf/accessible_best_practice_guidelines_for_publishers.pdf.

Kindle e-books purchased from Amazon.com are encrypted with TPMs proprietary to Amazon and are referred to by Amazon as "Kindle Format" Topaz or AZW encrypted files.[6] Copyright holders to e-books distributed via Amazon can use this TPM to specifically disable the text-to-speech functionality of e-books purchased on Amazon.com.[7] Copyright holders who self-publish through Kindle Direct Publishing "may choose, on a per-title basis, to have [Amazon] apply Digital Right Management (DRM) Technology."[8] Amazon's Frequently Asked Questions (FAQ) mentions that Kindle Direct Publishing DRM "is intended to inhibit unauthorized access to or copying of digital content files for titles."[9] However, copyright holders cannot communicate what kind of DRM they would like applied to their files and must choose between the only two options available: "enable digital rights management" or "do not enable digital rights management."[10] Thus, copyright holders who chose to enable TPMs may unknowingly be "inhibiting unauthorized access" needed by accessibility technology such as digital Braille displays and text-to-speech programs. In addition to the "optional" copy and access controls, all Kindle books have a trusted player encryption, which means they can only be read on Kindle devices or through an Amazon-provided reading app.[11]

Over 150 companies use Adobe Content Server to protect PDF and EPUB e-books, including Barnes and Noble, Sony, Kobo, and Overdrive.[12] Content Server "encrypts PDF and EPUB eBook files and allows publishers and retailers to manage the rights on the eBook files they distribute."[13] Authors, publishers, and distributers have a wide variety of digital rights management options within Adobe's program, including the ability to apply many nuanced types

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[6] *See, e.g. Reading Personal Documents on your Kindle*, Amazon.com Help and Customer Support, http://www.amazon.com/gp/help/customer/display.html?nodeId=200140600 (last visited Jan. 28, 2015).

[7] *Reading Basics for the Kindle Touch*, Amazon.com Help and Customer Service, http://www.amazon.com/gp/help/customer/display.html?nodeId=201242160 (last visited Jan. 28, 2015) ("If the rights holder does not allow Text-to-Speech, the Turn On Text-to-Speech option will be grayed out and you will not be able to select it.").

[8] *Upload and Preview Book Content*, Kindle Direct Publishing, https://kdp.amazon.com/help?topicId=AT1K7B0DRETM0 (last visited Jan. 30, 2015).

[9] *Frequently Asked Questions: 3-13: What is Digital Rights Management (DRM)?*, Kindle Direct Publishing, https://kdp.amazon.com/help?topicId=A36BYK5S7AJ2NQ#3-13 (last visited Jan. 30, 2015).

[10] *Upload and Preview Book Content*, Kindle Direct Publishing, https://kdp.amazon.com/help?topicId=AT1K7B0DRETM0 (last visited Jan. 30, 2015).

[11] *Read Everywhere with Our Free Reading Apps*, Amazon.com, https://www.amazon.com/gp/digital/fiona/kcp-landing-page?ie=UTF8&ref_=kcp_pc_mkt_lnd (last visited Jan. 30, 2015).

[12] Adobe Systems Incorporated, *Adobe eBook Platform: Authoring and Delivering e-books Across Devices White Paper* 2, 3 *available at* http://wwwimages.adobe.com/content/dam/Adobe/en/products/content-server/pdfs/adobe_ebook_platform_whitepaper.pdf

[13] *Id.*

of copy controls and access controls.[14] As more people self-publish and as more entities become involved in distributing e-books, the many features of Content Server can become easily lost in the shuffle. This is problematic because applying TPMs "can greatly decrease the accessibility of . . . material" and potential effects need to be carefully analyzed.[15]

Books purchased through the iBookstore are "protected by Apple's proprietary FairPlay DRM system."[16] In iBooks Author, Apple represents FairPlay as an optional copy control.[17] However, FairPlay is also automatically applied by Apple to every e-book as a trusted player encryption that prevents the e-book from being played on other platforms and an access control that prevents editing and other uses of the e-book.[18] Many Apple e-books are accessible to people who are blind, visually impaired, or print disabled and who also own an Apple device.[19] But unlike other distributors, Apple does not offer software to access its platform on a personal computer or non-Apple smartphone.[20] Thus, FairPlay encryption renders many e-books effectively inaccessible to people who are blind, visually impaired, or print disabled.

TPM-free e-books remain the exception, not the norm. While there has been a growing pressure by consumers, accessibility advocates, and others for content creators and distributors to reduce their use of TPMs, the practice continues on the majority of e-books.[21] TPM-free editions of more than 46,000 public domain e-books are available through Project Gutenberg; however, many distributors attach their own TPMs to public domain works.[22] Calibre's Open Books project tracks TPM-free e-books available for purchase that are not in the public domain.[23]

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[14] Micah Bowers, *On the Adobe eBook Platform – Overview*, BlueFire Blog http://www.bluefirereader.com/blog/?p=57 (Jan 13, 2012); *Category Archives: Adobe Publishing Platform*, Bluefire Reader, http://www.bluefirereader.com/blog/?cat=8 (last visited Jan. 30, 2015).

[15] Hilderley, *supra*, at 44.

[16] iBooks Author, *iBooks Store Publishing Overview*, http://support.apple.com/kb/ph2808 (last modified Jan. 30, 2015).

[17] *Id.* ("E-books sold "through the iBooks Store can be protected by… FairPlay DRM system, which helps prevent unauthorized duplication").

[18] Eric Lai, *Apple Disses our DRM for iPad, Adobe Says*, Computer World (Feb 18, 2010), http://www.computerworld.com/article/2521019/technology-law-regulation/apple-disses-our-drm-for-ipad--adobe-says.html

[19] *Accessibility*, Apple, https://www.apple.com/accessibility/ (last visited Jan. 30, 2015).

[20] Adobe Systems Incorporated, at 1.

[21] *See, e.g.* Joe Wikert, *A Call for a Unified E-book Market: The ToC Perspective,* Publishers Weekly (Feb. 3, 2012), http://www.publishersweekly.com/pw/by-topic/digital/content-and-e-books/article/50484-the-toc-perspective-a-call-for-a-unified-e-book-market.html

[22] *Free eBooks – Project Gutenberg*, http://www.gutenberg.org/wiki/Main_Page (last visited Jan. 30, 2015).

[23] *About Open Books*, Calibre ebook management, http://drmfree.calibre-ebook.com/about (last visited Jan. 30, 2015).

Open Books currently lists a mere 3,854 e-books as TPM-free.[24] By comparison, at least 3 million e-books are available for the Kindle through Amazon.com.[25]

B. Circumventing TPMs facilitates the use of e-books with accessibility technology.

The *NPRM* asks "how accessibility software interacts with TPMs and e-book technology to improve accessibility for persons who are blind, visually impaired, or print disabled."[26] The answer includes two interrelated parts. The first is how accessible technology interacts with a TPM-free e-book to make the text accessible to people who are blind, visually impaired, or print disabled. The second is how TPMs interact with accessibility technology to prevent that technology from effectively making the e-book accessible.

There are two main types of adaptive technology that are hindered by TPMs: text-to-speech screen readers and refreshable Braille displays. Both of these technologies work, generally speaking, by reading an e-book's text and translating it into another medium—audio or tactile information, respectively—that a person who is blind, visually impaired, or print disabled can perceive, thereby enabling access to the work. If the e-book is encumbered with TPMs, these technologies are unable to access the text and are thereby unable to provide access for the person who is blind, visually impaired, or print disabled. This issue has been described by libraries as "the greatest barrier to making . . . digital resources accessible."[27]

Screen readers provide text-to-speech functionality by reading out the text as it appears on the computer screen. The user designates which text she would like read out by sending commands to the program, either through the mouse or different keyboard combinations.[28] Screen readers also generally include navigation functions that allow the user to pause, speed up, or slowdown the reading, and also move back or forward by a word, sentence, line, or paragraph at a time. These kind of navigation functions are essential to reading an adapted book as a visually impaired reader can easily become lost as the computer "reader" rattles off the information on the screen. Applying various protections through TPMs can unexpectedly disable text-to-speech functionality, even in e-books that are otherwise designed to be accessible.[29]

Screen reader or text-to-speech capability is often limited. This software often relies on clunky reading programs that robotically read out the text. Screen readers often cannot read foreign words or graphic images, making many books, particularly math texts, inaccessible. Some screen readers only work within certain programs. For example, to be used with a screen reader,

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[24] *Calibre Open Books Project*, Calibre ebook Management, http://drmfree.calibre-ebook.com/by/genre

[25] *The Kindle Store*, Amazon.com, http://www.amazon.com/s/ref=nb_sb_noss?url=search-alias%3Ddigital-text&field-keywords=&rh=n%3A133140011 (last visited Jan. 5 2015).

[26] *2014 NPRM,* 79 Fed. Reg. at 73,863.

[27] Case, *et al.*, *supra*, at 7.

[28] AFB, *Screen Readers*, American Foundation for the Blind, www.afb.org/ProdBrowseCatResults.asp?CatID=49.

[29] Hinderly, *supra*, at 7.

Kindle books that do not block text-to-speech generally cannot be accessed on a standard Kindle e-reader but instead must be read through the Kindle for PC program, installed on a computer that also has an outside text-to-speech program installed.[30]

Refreshable Braille displays are physical units offering moving, tactile feedback that attach to a computer, tablet, or smart phone and continuously refresh as the user moves the cursor around the screen.[31] Braille displays can display up to 80 characters at a time.[32] Braille displays provide direct access to information, including the format, spacing, and spelling of words.[33]

TPMs can be circumvented to allow screen readers and digital Braille displays to access the digital text in an e-book. Notwithstanding the *NPRM*'s inquiries, we do not offer a detailed description of stripping TPMs out of concerns that doing so might implicate the bans on trafficking in Section 1201(a)(2) and 1201(b).[34]

For the purpose of Section 1201(a)(1)(C), it should suffice to note that instructions for circumvention are widely available on popular websites and can be obtained by both users who are blind, visually impaired, or print-disabled and authorized entities that serve them.[35] Circumventing TPMs requires an e-book manager and a special plugin that will remove the TPMs.[36] When a user opens an e-book in the manager, the TPMs are removed and the e-book can be saved in a new format that will allow accessibility technology to access the e-book.[37]

5. *Noninfringing Uses*: Reproducing Inaccessible Electronic Literary Works into Accessible Formats for People who are Blind, Visually Impaired, or Print Disabled

Congress made clear in the 1976 Copyright Act that reproducing inaccessible literary works for use by people who are blind, visually impaired, or print disabled is a noninfringing use of

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[30] *Kindle for PC with Accessibility Plugin*, Amazon.com Help and Customer Support http://www.amazon.com/gp/help/customer/display.html/ref=help_search_1-1?ie=UTF8&nodeId=200596280&qid=1422417472&sr=1-1 (last visited Jan. 28, 2014) ("In order to use the text-to-speech feature, an external screen reader program must be installed and running on the Windows PC").

[31] AFB, *Refreshable Braille Displays*, www.afb.org/ProdBrowseCatResults.asp?CatID=43.

[32] *Id.*

[33] *Id.*

[34] *See* 17 U.S.C. 1201(a)(2); 17 U.S.C. 1201(b).

[35] *See, e.g.*, Susan Kelmer, *Affidavit from Susan Kelmer, Alternate Format Access Coordinator at the University of Colorado Boulder Disability Services Office,* Appendix A ("*Kelmer Affidavit*"); Thorin Klosowski, *How do I Get Rid of the DRM on my e-books and Video?*, lifehacker (Oct. 24, 2012), http://lifehacker.com/5954466/how-do-i-get-rid-of-the-drm-on-my-ebooks-and-video; Charlie Sorrell, *How to Strip DRM from Kindle e-books and Others*, Wired (Jan. 17, 2011), http://www.wired.com/2011/01/how-to-strip-drm-from-kindle-e-books-and-others/.

[36] *See, e.g.*, Sorrell, *supra*.

[37] *Id.*

those works.[38] In passing the Chafee Amendment, Congress explicitly exempted reproduction of copyrighted works for use by people who are blind, visually impaired, or print disabled.[39] The Chafee Amendment reaffirmed Congress's commitment to providing equal access to people who are blind, visually impaired, or print disabled as described in the Americans with Disabilities Act. Even without the Chafee Amendment, reproducing inaccessible literary works in accessible formats for use by people who are blind, visually impaired, or print disabled is a noninfringing fair use of those works.

A. Reproducing copies in accessible formats is non-infringing under the Chafee Amendment.

The Chafee Amendment to the Copyright Act authorizes reproduction and distribution of copyrighted works in alternative formats for use by people who are blind, visually impaired, or print disabled. In relevant part, the Chafee Amendment provides that:

> Notwithstanding the provisions of section 106, it is not an infringement of copyright for an authorized entity to reproduce or to distribute copies or phonorecords of a previously published, nondramatic literary work if such copies or phonorecords are reproduced or distributed in specialized formats exclusively for use by blind or other persons with disabilities.[40]

Chafee allows authorized entities to create and provide copies of accessible works for use by people who are blind, visually impaired, or print disabled.[41] Renewing the proposed exemption will ensure that Chafee continues to apply, as intended, to electronic books.

The first part of the proposed exemption allows individual consumers who are blind, visually impaired, or print disabled to circumvent TPMs on lawfully obtained e-books in order to read those e-books through assistive technologies so long as the rightsholder is remunerated.[42] This follows the Chafee Amendment's logic of allowing "reproduc[tion]… of a previously published" work "in specialized formats exclusively for use by blind or other persons with disabilities."[43]

The second part of the proposed exemption exactly mirrors the language of the Chafee Amendment and allows circumvention of TPMs "when such work is a nondramatic literary work, lawfully obtained and used by an authorized entity pursuant to" the Chafee Amendment.[44] In effect, the proposed exemption ensures that the purpose of the Chafee Amendment—to allow

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[38] H.R. Rep. No. 94-1476, at 73 (1976), *reprinted in* U.S.C.C.A.N 5659. 5687; S. Rep. No. 94-473, at 80 (1975).
[39] 17 U.S.C. § 121(a).
[40] *Id.*
[41] 37 C.F.R. § 201.40(b)(1).
[42] 37 C.F.R. § 201.40(b)(1)(i).
[43] 17 U.S.C. § 121(a).
[44] 37 C.F.R § 201.40(b)(1)(ii).

books to be "reproduced or distributed in specialized formats exclusively for use by blind or other persons with disabilities"—can be realized with e-books as it has been with print books.[45]

B. Converting to accessible formats is a non-infringing fair use.

Converting inaccessible literary works into accessible and useable formats is also a noninfringing fair use of those works. The legislative history of the 1976 Copyright Act makes clear that converting inaccessible literary works for use by people who are blind, visually impaired, or print disabled is a quintessential example of fair use.[46] Indeed, as the Supreme Court recognized in Sony, "[m]aking a copy of a copyrighted work for the convenience of a blind person [was] expressly identified … as an example of fair use" by both chambers during the passage of the 1976 Copyright Act.[47]

This year, the Second Circuit affirmed that conversion of inaccessible copyrighted works into accessible digital formats for use by people who are blind, visually impaired, or print disabled is a fair use in *Authors Guild, Inc. v. HathiTrust*.[48] As the *HathiTrust* court held, "the doctrine of fair use allows [the] provi[sion of] full digital access to copyrighted works to [the] print-disabled."[49]

Inclusion of providing accessible copies to people who are blind, visually impaired, or print disabled within the fair use doctrine is so uncontroversial that analysis of the factors is unnecessary. However, considering them conclusively demonstrates the fairness of the use.

1. The purpose and character of converting e-books to accessible formats weighs in favor of fair use.

The first factor of fair use analysis focuses on the purpose and character of the new use.[50] Factor one requires the use to "serve broader public purposes."[51]

Converting an inaccessible copyrighted work into an accessible format clearly serves a broad public benefit and results in direct, tangible benefit for many Americans who are blind, visually impaired, or print disabled.[52] Providing access for people who are blind, visually impaired, or print disabled serves "a valid purpose under factor one."[53]

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[45] 17 U.S.C. § 121(a).

[46] H.R. Rep. No. 94-1476, at 73 (1976); S. Rep. No. 94-473, at 80 (1975).

[47] *Sony Corp. of America v. Universal City Studios, Inc.* 464 U.S. 417, 455 n.40 (1984).

[48] *Authors Guild, Inc. v. HathiTrust*, 755 F.3d 87 (2d Cir. 2014).

[49] *Id.* at 103.

[50] 17 U.S.C. § 107(1)

[51] *Twin Peaks Prods., Inc. v. Publications Int'l, Ltd.*, 996 F.2d 1366, 1375 (2d Cir. 1993)

[52] *Sega Enters. Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1523 (9th Cir. 1992) ("Public benefit need not be direct or tangible, but may arise because the challenged use serves a public interest."); *Key Maps, Inc. v. Pruitt*, 470 F. Supp.33, 38 (S.D. Tex. 1978) (use benefitted the public and was therefore fair use).

[53] *HathiTrust,* 755 F.3d at 102.

The Supreme Court made clear that providing access to books for people who are blind, visually impaired, or print disabled is a fair use under factor one in *Sony*, noting "[m]aking a copy of a copyrighted work for the convenience of a blind person is expressly identified by the House Committee Report as an example of fair use, with no suggestion that anything more than a purpose to entertain or to inform need motivate the copying."[54] The *HathiTrust* court also points out that the legislative history referred to by the Supreme Court provides clear "guidance support[ing] a finding of fair use in the unique circumstances presented by print-disabled readers."[55]

Finally, Congress's continuing "commitment to ameliorating the hardships faced by the blind and the print disabled" supports a finding of fair use under factor one.[56] In the Americans with Disabilities Act, Congress declared the goal of "assur[ing] equality of opportunity, full participation, independent living, and economic self-sufficiency for such individuals."[57] Congress reaffirmed this commitment with the Chafee Amendment, which "illustrates Congress's intent that copyright law make appropriate accommodations for the blind, visually impaired, or print disabled."[58]

2. The nature of converting e-books to accessible formats does not weigh against fair use.

The second fair use factor asks courts to examine the nature of the copyrighted work. The proposed exemption would cover access to works of many kinds, including novels, text books, technical manuals, and academic journals. As in *HathiTrust,* "[t]his does not preclude a finding of fair use, however, given [the] analysis of the other factors."[59]

3. The amount and substantiality of the portion necessarily used in converting e-books to accessible formats does not weigh against fair use.

Although making an e-book accessible requires a full conversion of the original copyrighted work, using a work in its entirety does not weigh against fair use.[60] Where use of the entire underlying work is necessary for people who are blind, visually impaired, or print disabled, the third factor does not weigh against a finding of fair use.[61]

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[54] *Sony,* 464 U.S. at 455 n.40 (1984); *see also HathiTrust*, 755 F.3d at 102.

[55] *HathiTrust*, 755 F.3d at 102.

[56] *Id.*

[57] 42 U.S.C. § 12101(7).

[58] *HathiTrust*, 755 F.3d at 102; *see also* 17 U.S.C. § 121.

[59] *HathiTrust*, 755 F.3d at 102.

[60] *See Nunez v. Caribbean Int'l News Corp.*, 235 F.3d 18, 24 (1st Cir. 2000) (holding that using an entire photograph was necessary because any less would have defeated the new use); *Campbell v. Acuff-Rose Music, Inc*., 510 U.S. 569, 584 (1994) (holding that an effective parody can necessitate taking the "heart" of a song).

[61] *HathiTrust* 755 F. 3d at 103.

4. The effect of converting e-books to accessible formats on the potential market or value weighs in favor of fair use.

User and authorized entity-created accessible copies of e-books do not negatively affect the market or value of copyrighted works. The House Report on the 1976 Copyright Act noted that accessible versions, "such as copies in Braille and phonorecords of oral readings (talking books), are not usually made by the publishers for commercial distribution."[62] Although progress is being made, the market failures recognized by Congress nearly forty years ago largely continue today.

As the *HathiTrust* court noted just last year,"[i]t is undisputed that the present-day market for books accessible to the handicapped is so insignificant that 'it is common practice in the publishing industry for authors to forgo royalties that are generated through the sale of books manufactured in specialized formats for the blind.'"[63] The industry's failure to provide accessible e-books signaled to the court that preserving the ability to convert books into accessible versions that can be consumed and enjoyed by people who are blind, visually impaired, or print disabled weighed the fourth factor conclusively in favor of fair use.[64]

Moreover, conversion of an inaccessible copyrighted work into an accessible, usable version likely has a positive impact on the market for e-books. People who are blind, visually impaired, or print disabled are actively disincentivized from purchasing e-books in a market where they are not allowed to convert those books into an accessible and useable format. Without the ability to lawfully convert e-books into accessible formats, people who are blind, visually impaired, or print disabled will be physically prevented from reading e-books. Allowing people who are blind, visually impaired, or print disabled to convert e-books into accessible and useable formats will increase market demand for e-books among this community.

6. *Adverse Effects*: Restricted Access to Literary Works for People who are Blind, Visually Impaired, or Print Disabled

Circumventing TPMs is often the only means available to people who are blind, visually impaired, or print disabled to access e-books, e-textbooks, and other digitally distributed literary works. Without this exemption, millions of Americans will be denied access to the large portion of e-books which are currently unavailable in accessible formats. Among popular and award-winning novels from the last 50 years of Hugo Awards and Pulitzer Prizes for fiction, 33.33% and 28.26% of these decorated novels, respectively, were inaccessible through Amazon's Kindle store.[65]

Moreover, it is difficult to determine which of the millions of e-books are not accessible to people who are blind, visually impaired, or print disabled. Whether text-to-speech is enabled

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[62] H.R. Rep. No. 94-1476, at 73 (1976); S. Rep. No. 94-473, at 80 (1975).

[63] *HathiTrust*, 755 F.3d at 102.

[64] *Id.*

[65] *The Accessibility of Hugo Award Winning Books Currently Available for Purchase on the Kindle Platform*, Appendix E; *The Accessibility of Pulitzer Prize Winning Books Currently Available for Purchase on the Kindle Platform*, Appendix F.

cannot always be seen in the bookstore's description. On certain e-book stores, like the Barnes & Noble store, there is no indication at all as to whether a book is accessible or not. This means that people with print disabilities often will not find out that their e-books are inaccessible until after purchase. Ultimately, this will lead to a decrease market participation among people who are blind, visually impaired, or print disabled.

A. Prohibiting circumvention of TPMs will deny access to e-books for millions of Americans.

"Print disability" is a broad term that includes visual impairments, learning disabilities, and physical disabilities. Retinopathy, glaucoma, cataracts, bi-lateral optic nerve hypoplasia, corneal disorders, boxing injuries, genetic disorders, infections, macular degeneration and other age-related ailments can lead to vision loss and impairment. Learning disabilities like dyslexia also affect print access. Physical disabilities that affect access to print include muscular dystrophy, multiple sclerosis, and cerebral palsy. Currently, vision loss affects 20.6 million Americans, and 41 million Americans have dyslexia.[66] The NFB has calculated that approximately 80,000-120,000 students are blind, visually impaired, or print disabled.[67]

Millions of Americans who are blind, visually impaired, or print disabled need to use digital accessibility software in order to read, use, and enjoy digital copyrighted works. Those Americans will be limited in their ability to lawfully consume, read, and enjoy literary works if the proposed exemption is not renewed.

B. Prohibiting circumvention negatively affects the educational opportunities of many students.

A prohibition on circumvention of TPMs in e-books especially impacts students who are blind, visually impaired, or print disabled. In a recent settlement agreement with the U.S. Department of Justice and Department of Education, one academic institution agreed to purchase only digital content and devices that were fully accessible or else provide "reasonable modification for this type of technology."[68] Reasonable modification is defined as the changes that are necessary for "blind individuals [to] access and acquire the same information, engage in the same interactions, and enjoy the same services as sighted students with substantially equivalent ease of use."[69]

In practice, this settlement requires a university to convert e-textbooks into accessible formats. Many universities, libraries, and other higher education institutions employ faculty

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[66] AFB, *Facts and Figures on Adults with Vision Loss* (May 2014), http://www/afb.org/info/blindness-statistics/adults/facts-and-figures/235; The Dyslexia Research Institute, *The Dyslexia Research Institute Mission*, http://www.dyslexia-add.org/

[67] NFB, *Students with Print Disabilities Who May Require Alternate Format, Accessible Materials,* Appendix D.

[68] *See, e.g.*, *Case Western Settlement Agreement* (Dec. 22, 2009)*, available at* http://www.ada.gov/case_western_univ.htm.

[69] *Id.*

members specifically for the purpose of making textbooks and other materials accessible for students who are blind, visually impaired, or print disabled.[70] Often, accessibility requires the circumvention of TPMs that interfere with accessibility technology.[71]

Despite federal legislation mandating equal access, "the overwhelming majority of university websites, digital books, PDFs, learning management systems, lab software, and online research journals are inaccessible to students with print disabilities."[72] Notwithstanding the availability of "accessibility standards … for many digital content formats, content publishers do not always utilize them to maximum advantage."[73] The experience of a student at New Hampshire University is particularly illustrative of the harms imposed on students who are blind, visually impaired, or print disabled:

> A lot of professors encouraged and often required their students to use scholarly articles and journals to do research. I liked the concept of an online library database, because I assumed that such material would be accessible to me simply because it was available electronically. I was incorrect in this assumption, however, because much of the material I needed to access was in inaccessible PDFs.[74]

C. Audiobooks are not an adequate alternative to circumvention

Audiobooks are expressive reproductions of copyrighted works that use one or more voice actors to perform the work. The performance is then fixed onto audio CDs or MP3 files that can be independently distributed.

Audiobooks are not an adequate alternative to circumvention because audio versions are not available for the vast majority of e-books. The number of audiobooks available on the open market is negligible compared to the number of e-book titles that could potentially be accessible to people who are blind, visually impaired, or print disabled in the absence of TPMs. For example, Audible.com, a leading audiobook provider, has only approximately 150,000 audiobooks available—compared to more than one million e-books available for sale on Amazon.com alone.[75] Even when considering the number of audiobooks available specifically for use by people who are blind, visually impaired, or print disabled, the imbalance is clear. Bookshare, "the world's largest accessible online library for people with print disabilities" contains only 300,000 titles, not all of which are in audiobook format.[76]

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[70] *E.g.*, *Kelmer Affidavit*.

[71] *Id.*; *see also* Case, *supra* at 7.

[72] Lauren McLarney *About the TEACH Act,* National Federation of the Blind, https://nfb.org/TEACH (last visited Feb. 4, 2015).

[73] *See, e.g.*, Case, *supra*, at 28.

[74] Student at New Hampshire University, *Letters to Current Congressional Representatives in Favor of the Technology, Education, and Accessibility in College and Higher Education Act,* Appendix B.

[75] *Compare* Audible, audible.com (last visited Feb. 5, 2015) *with The Kindle Store*, *supra.*

[76] *Who We Are,* Bookshare, https://www.bookshare.org/cms/about (last visited Jan. 5, 2015).

Even when an e-book is also available in audiobook format, the audiobook is not an adequate alternative to circumvention. Navigation is an important feature of accessible e-books that is often not available in audiobooks. Accessibility features help people who are blind, visually impaired, or print disabled to not only read but also to navigate through e-books using page numbers and chapter titles. Finally, audiobooks are generally too expensive to be an adequate substitute for e-books, costing up to three times as much as an e-book.[77]

D. The EPUB 3 standard is not yet an adequate alternative to circumvention

The International Digital Publishing Forum's adoption of an updated EPUB standard with integrated accessibility elements is promising, but has not been widely adopted and thus is not an adequate alternative to circumvention. In 2013, the International Digital Publishing Forum (IDPF) released an updated EPUB standard which integrated accessibility elements from the DAISY Consortium's standard.[78] IDPF made accessibility a central issue in releasing EPUB 3, noting, "a major goal of EPUB is to facilitate content accessibility, and a variety of features in EPUB 3 support this requirement."[79]

There is hope that the EPUB 3 standard, and others like it, may someday obviate the need for an accessibility exemption. Many groups applauded the EPUB 3 standard.[80] Library Journal declared that the new standard "could promise a sea change, enabling publishers to integrate accessibility features into their eBook production workflows, creating e-books that are immediately available to everyone, including customers with print disabilities."[81] The standard was released with high hopes that "all of the books published each year have the potential to be accessible right out of the box."[82]

Unfortunately, the EPUB 3 standard is not yet an adequate alternative because, much like when the Copyright Act was first passed, "accessibility continues to be a secondary concern for many companies."[83] While adoption of the EPUB 3 standard continues to grow, it is not yet widespread.[84]

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[77] *See generally* Appendix G.

[78] Matt Enis, *Accessibility Upgrade: EPUB, Libraries, and Ebook Accessibility*, Library Journal (April 16, 2013) *available at* http://lj.libraryjournal.com/2013/04/technology/ebook-accessbility/#_.

[79] International Digital Publishing Forum, *EPUB 3 Overview: Recommended Specification* 26 June 2014, *available at* http://www.idpf.org/epub/301/spec/epub-overview.html

[80] *See generally* International Digital Publishing Forum, *IBM EPUB Adoption Quote Sheet*, http://idpf.org/news/ibm_adopts_epub-supporter-quotes.

[81] Enis, *supra.*

[82] *Id.*

[83] *Id.*

[84] *See, e.g.*, *EPUB 3 Support Grid*, Appendix C.

When adopted, the EPUB 3 standard "allows accessibility features to be added to any eBook —but doesn't mandate them."[85] Even when publishers adopt accessible formats that conform to the EPUB 3 standard, there are still many issues on each platform because "EPUB 3 cannot address poor accessibility support with a device's interface."[86]

In addition, many devices do not support EPUB 3, or only support some features.[87] This means that even if a publisher adopts the accessibility-friendly EPUB 3 standards, a blind, visually impaired, or print disabled reader may not be able to access some features depending on the device that he or she owns.[88]

Finally, the post-production application of TPMs can render the accessibility features of EPUB 3 completely inaccessible.[89] These issues are unlikely to be resolved before at least a substantial portion of this triennial review period has passed. As Mark Bide, Executive Director of EDItEUR argued, "publishers cannot achieve mainstreaming of accessible e-books on their own."[90] Authors, publishers, platform and device providers, distributors, and retailers can all affect the accessibility of e-books.[91]

E. Alternate platforms are not an adequate alternative to circumvention.

People who are blind, visually impaired, or print disabled should not be prevented from accessing an e-book that they have purchased because that e-book is available on another accessible platform. A person should be able to access an e-book on their preferred device, and should be able to circumvent TPMs that prevent them from enjoying the full capabilities of their preferred device.

As the National Telecommunications and Information Administration (NTIA) noted during the 2012 review, [r]equiring visually impaired Americans to invest hundreds of dollars in an additional device (or even multiple additional devices), particularly when an already-owned device is technically capable of rendering literary works accessible, is not a reasonable alternative to circumvention."[92] The expense that people who are blind, visually impaired, or print disabled incur in gaining access to literary works must be kept in mind. Nearly 8.2 million Americans with who are blind, visually impaired, or print disabled are near or below the poverty level.[93]

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[85] Mark Bide, The Case for Adopting Accessibility using ePub 3, March 31, 2014, EPUB Zone, http://epubzone.org/news/the-case-for-adopting-accessibility-using-epub-3

[86] Enis, *supra.*

[87] Bill McCoy, *BEA 2013: The Seven Deadly Myths of Digital Publishing*, Publishers Weekly (May 29, 2013), http://www.publishersweekly.com/pw/by-topic/industry-news/bea/article/57387-bea-2013-the-seven-deadly-myths-of-digital-publishing.html.

[88] *Id.*

[89] Hinderley, *supra* at 8.

[90] Bide, *supra.*

[91] *Id.*

[92] Letter from Lawrence E. Strickling, Assistant Secretary, NTIA, to Maria Pallante, Register of Copyrights, at 5 (Sept. 21, 2012), http://copyright.gov/1201/2012/2012_NTIA_Letter.pdf.

[93] AFB, *supra*.

Americans who are blind, visually impaired, or print disabled face numerous challenges in their day-to-day lives, and require other expensive services just to get by. It is unjust to require them to expend their resources on extraneous devices when they may already have an otherwise perfectly capable device.

Although leaders in the market for hand-held reading devices are taking steps to increase accessibility through the emergence of tablet computers with e-reader capabilities, their devices remain extremely expensive and complex leaving less tech-savvy and low-income consumers who are blind, visually impaired, or print disabled with few options for accessible devices.

Similarly, built-in accessibility features in e-reader devices are still rare.[94] Cheaper Kindle models like Paperwhite and Reader do not offer text-to-speech accessibility.[95] The Barnes and Noble Nook also lack text-to-speech capability though the feature is currently available in the Nook HD "tablet."[96] Cheaper e-reader devices such as the Kindle, Nook, Kobo, and Sony Reader are all totally inaccessible out of the box and thus unusable to people with print disabilities.

Even purchasing devices that are recognized for their accessibility does not guarantee that a person who is blind, visually impaired, or print disabled will be able to access all digital content. Some consumers who are blind, visually impaired, or print disabled believe that the Kindle Fire HDX 8.9, a handheld reading device that sells for $379, has excellent accessibility features.[97] Even still, a review of the Kindle Fire HDX 8.9 notes that the reading experience remains limited, and similar to Apple's service, the device is locked to Amazon, limiting reading options even further.[98] Turning on the text-to-speech function requires accessing the device's website, and this function does not remain active throughout the use of the device. This means that users who are blind, visually impaired, or print disabled cannot effectively navigate from e-book to e-book on a Kindle device.

Despite general support for accessibility, it is unlikely that the market will make drastic moves to provide for universal accessibility. In proceedings at the Federal Communications Commission, the Coalition of E-reader Manufacturers displayed a reluctance to enhance e-reader accessibility, due to the expensive "engineering, hardware and licensing costs" required to

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[94] *See Accessibility for Fire,* Amazon.com, https://www.amazon.com/gp/feature.html?docId=1000632481; *iOS: A Wide Range of Features for a Wide Range of Needs,* Apple, https://www.apple.com/accessibility/ios/; *Barnes and Noble Accessibility Statement,* Barnes and Noble, https://www.amazon.com/gp/feature.html?docId=1000632481.

[95] *Kindle eBook Readers*, Royal National Institute of Blind People, http://www.rnib.org.uk/information-everyday-living-reading-ebook-reader-reviews/kindle-ebook-readers (last visited Jan. 26, 2015).

[96] *Accessibility and E-Readers*, Accessible Technology Coalition, http://atcoalition.org/article/accessibility-and-e-readers (last visited Jan. 26, 2015).

[97] Amy Mason, *Kindle Fire HDX*, National Federation of the Blind, (Dec. 3, 2013), https://nfb.org/blog/atblog/kindle-fire-hdx.

[98] *Id.*

accommodate greater accessibility in seeking a temporary exemption from the Commission's accessibility rules to these devices—which the Commission recently renewed.[99] Unfortunately, these claims cast doubt on the prospect of future increases in the number of accessible devices.

7. *Statutory Factors*: Additional Considerations under Section 1201

Under Section 1201, the Librarian of Congress additionally considers five factors in considering whether to grant an exemption:

(A) The availability for use of copyrighted works;
(B) The availability for use of works for nonprofit archival, preservation, and educational purposes;
(C) The impact that the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research;
(D) The effect of circumvention of technological measures on the market for or value of copyrighted works; and
(E) Such other factors as the Librarian considers appropriate.[100]

Each of these factors weigh in favor of renewing the proposed exemption.

A. The Availability for Use of Copyrighted Works

During the twelve years this exemption has been in place, it has provided people who are blind, visually impaired, or print disabled the means to access copyrighted e-books which were previously unavailable to them. Although there have been positive changes in the e-book marketplace, access to e-books in accessible formats is still not assured. As ARL found, "an analysis of information technology and digital publishing instead tells a mixed story of progress and regress, of decentralization, lack of industry standards, and a host of reasons why… advocacy for technological accessibility for the print disabled is urgent."[101] Renewing this exemption would allow people who are blind, visually impaired, or print disabled to continue to legally circumvent TPMs in order to gain access to the copyrighted works they have purchased.

Without the proposed exemption, many e-books, journal articles, and e-textbooks are not accessible by people who are blind, visually impaired, or print disabled. The *HathiTrust* court noted that the number of accessible e-books currently available is a minimal percentage of the total amount of books worldwide.[102] In fact, of the approximately one million books published

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[99] FCC, *Coalition of E-Reader Manufacturers' Petition for Waiver of ACS Rules*, CG Docket No. 10-213 (Jan. 28, 2014), http://www.fcc.gov/document/coalition-e-reader-manufacturers-petition-waiver-acs-rules.

[100] 17 U.S.C. § 1201(a)(1)(C).

[101] Case, *supra*, at 10.

[102] *HathiTrust*, 755 F.3d at 103.

yearly, less than 5% are made available in accessible formats.[103] For example, in our survey of 50 years of Pulitzer Prize winners for fiction, 28.26% of the winning novels were unavailable in an accessible format on Amazon's Kindle store.[104] In a survey of 50 years of Hugo Award winners, a third of the winning novels were not available in an accessible e-book format through the Kindle store.[105] Circumventing the TPMs that block text-to-speech functionality and other accessibility technology is the only way for a Kindle reader protected by the proposed exemption to access these popular titles. The unavailability of accessible e-books on other platforms may be even greater: however, a survey is impossible to conduct because text-to-speech compatibility is not specified in either the iBookstore or the Nook store.

B. The Availability for Use of Works for Nonprofit Archival, Preservation, and Educational Purposes

The educational benefit this exemption has and would continue to provide to students who are blind, visually impaired, or print disabled favors granting the proposed exemption. Students with disabilities face particular difficulties finding and using accessible class materials in a meaningful way and within acceptable time periods. TPMs "significantly limit libraries' ability to make materials accessible – including journals, databases, e-books, and online textbooks."[106]

The ability to circumvent TPMs on digital textbooks and other academic materials ensures that students who are blind, visually impaired, or print disabled are afforded equal access to education technologies. It often can take up to six weeks to acquire, create, or modify a paper or digital textbook to allow a student who is blind, visually impaired, or print-disabled to use it.[107] This means that once an instructor makes textbook information available, a student may not be able to achieve meaningful and equal participation in the learning experience until almost halfway through a semester. This delay can significantly limit a student's academic success solely because of his or her disability.

The ability to legally circumvent TPMs allows for students who are blind, visually impaired, or print disabled to study Science, Technology, Engineering and Math (STEM) with less delay. This is largely due to the tendency for these texts to rely heavily on diagrams and graphics, and the resulting difficulty in making them accessible. This is especially important as the U.S.

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[103] *Limitations and Exceptions: Access to Books for the Visually Impaired – Background Brief*, World Intellectual Property Organization, http://www.wipo.int/pressroom/en/briefs/limitations.html (last updated Jan. 2014).

[104] *The Accessibility of Pulitzer Prize Winning Books Currently Available for Purchase on the Kindle Platform*, Appendix E.

[105] *The Accessibility of Hugo Award Winning Books Currently Available for Purchase on the Kindle Platform*, Appendix F

[106] Case, *supra* at 7; *see also Kelmer Affidavit*.

[107] *Alternative and Electronic Format*, University of Colorado Boulder Disability Services, http://disabilityservices.colorado.edu/accommodations/alternative-and-electronic-format (last visited Jan. 19, 2015).

Department of Education and the White House have placed increasing importance on STEM education and proficiency.[108]

Susan Kelmer from the University of Colorado Boulder's Disability Services Office notes that STEM textbooks can take hundreds of hours to convert into an accessible format.[109] In providing accessible materials to students, she explains that she must resort to circumventing TPMs when publishers choose not to enable text-to-speech, as some publishers are unresponsive to appeals for an accessible version.[110] Her duties of non-discrimination under the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act require her to provide students with accessible textbooks as quickly as possible which often requires her to circumvent TPMs.[111] A renewal of this exemption will allow Disability Service Offices at universities around the country to continue providing students who are blind, visually impaired, or print disabled access to their textbooks.

C. The Impact of the Prohibition on the Circumvention of Technological Measures Applied to Copyrighted Works on Criticism, Commentary, News Reporting, Teaching, Scholarship, or Research

The ability to access and read books is an important and valuable asset to democracies. Thomas Jefferson noted the importance of literacy to a free society noting that "[w]here the press is free and every man able to read, all is safe."[112] Similarly, the First Amendment's right to freedom of speech indirectly necessitates that citizens are able to access it.[113] The value that this exemption provides for access to literature, social inclusiveness, and active and meaningful democratic participation weighs in favor of granting an exemption.

The importance of literacy to democracy is noted in the Marrakesh Treaty, which was drafted in part to acknowledge how challenges to blind, visually impaired, or print disabled people are " prejudicial to the complete development of persons with visual impairments or other print disabilities, which limit their freedom of expression, including the freedom to seek, receive and impart information and ideas of all kinds on equal basis with others, including through all forms of communication of their choice, their enjoyment of the right to education, and the opportunity to conduct research."[114] Similarly, literacy—and thus, the ability to access literature—is fundamental human right integral to the fulfillment of other human rights, and

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[108] *See* Science, *Technology, Engineering and Math: Education for Global Leadership*, U.S. Department of Education, http://www.ed.gov/stem (last visited Jan. 26, 2015).

[109] *Kelmer Affidavit.*

[110] *Id.*

[111] *Id.*

[112] Jack Lynch, *"Every Man Able to Read" Literacy in Early America*, Colonial Williamsburg Journal, (Winter 2011), http://www.history.org/foundation/journal/winter11/literacy.cfm.

[113] U.S. Const. Amend. I.

[114] Marrakesh Treaty Preamble, June 27, 2013, World Intellectual Property Organization, *available at* http://www.wipo.int/treaties/en/text.jsp?file_id=301016#art7.

without which a person may lack the ability to effectively participate in democracy and exercise citizenship.[115]

Statistics show that people who are blind, visually impaired, or print disabled generally fall below average when it comes to education, unemployment, and financial security. The employment rate of adults who are visually impaired is 37.7%, with 31.2% living below the poverty line, compared to national averages of 5.6% unemployed and 15% living below the poverty line.[116] Similarly, 59% of the people who are blind, visually impaired and print disabled have only a high school education or less.[117] These obstacles may make it even more difficult for people who are blind, visually impaired, or print disabled to meaningfully participate in the social and democratic spheres due to a relative lack of resources and education. Renewing this exemption would help afford all citizens equal access to education, education technologies, and democratic participation.

The ability to circumvent TPMs on e-books allows people who are blind, visually impaired, or print disabled to participate meaningfully in a social context. Copyright law is intended to incentivize authors to create literary works, but the *HathiTrust* court notes that copyright law is not, "an inevitable, divine, or natural right that confers absolute ownership of their creations. It is designed rather to stimulate activity and progress in the arts for the intellectual enrichment of the public."[118]

Complete protection of copyrighted works should not trump the civil and human rights of Americans who are blind, visually impaired, or print disabled. The lack of accessible material, and the length of time it typically takes to make books accessible means that millions of Americans are limited in their ability to participate in the social context of literature, including book clubs and cultural references. This is especially true when alternative reading formats are unavailable. Circumvention allows people who are blind, visually impaired, or print disabled to bypass wait times for material to become accessible and available, and allows them to participate in the social dialogue around literature, which ultimately helps fulfill the underlying purpose of copyright law.

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[115] *See* United Nations Educational, Scientific, and Cultural Organization, *International Literacy Day, 8 September 2012, Literacy and Peace*, Sept. 8, 2012. http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/pdf/NotesLiteracy-Peace.pdf.

[116] *Blindness Statistics*, National Federation of the Blind, https://nfb.org/blindness-statistics (last updated Aug. 6, 2014); *News Release*, Bureau of Labor Statistics, U.S. Department of Labor, The Employment Situation-December 2014, Jan. 9, 2014, *available at* http://www.bls.gov/news.release/pdf/empsit.pdf ; *Poverty in the United States: A Snapshot*, National Center for Law and Economic Justice, http://www.nclej.org/poverty-in-the-us.php (last visited Jan. 19, 2015).

[117] *Blindness Statistics*, National Federation of the Blind, https://nfb.org/blindness-statistics (last updated Aug. 6, 2014).

[118] *HathiTrust*, 755 F.3d at 94-95 (quoting Pierre N. Leval, *Toward a Fair Use Standard*, 103 Harv. L. Rev. 1105, 1107 (1990)).

D. The Effect of Circumvention of Technological measures on the Market for or Value of Copyrighted Works

In the twelve years that this exemption has been in place, there is no evidence, whether anecdotal or empirical, of any harm being imposed on the e-book market, or to the value of copyrighted works. The e-book market has grown substantially since 2008 notwithstanding the existence of the exemption.[119] Similarly, there were no objections from creators and copyright owners during the last triennial review hearing.[120] There is little argument that owners of copyrighted works are negatively impacted by this exemption; in fact, copyright holders generally support the increased accessibility for people who are blind, visually impaired, and print disabled.[121]

E. Other Factors Appropriate for the Librarian to Consider

The renewal of this exemption is essential to keep the United States in compliance with the values of the international community embodied in the Marrakesh Treaty. As part of its commitment to facilitating universal access to literary works, the WIPO designed the Marrakesh Treaty to create global standards and rules for creating accessible versions of literary works. The treaty mandates that member states provide exceptions to their domestic copyright laws to allow the production and distribution of accessible versions of books to people who are blind, visually impaired, or print disabled.[122]

Article 7 of the Treaty requires contracting parties to take appropriate measures to ensure legal protection and remedies against circumvention, but to also ensure beneficiaries are not prevented from enjoying the limitations and exceptions provided for in the Treaty.[123] For the United States to comply with this requirement, the Copyright Office must renew this exemption.

Even if granting an exemption were not required by the Marrakesh Treaty, the United States has been and should remain a leader in copyright and accessibility. In order for the United States to remain a leader in international copyright law and in equal access, it is important that our legal system afford people with print disabilities at least the same legal benefits that other

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[119] *Revenue from e-Book Sales in the United States from 2008-2018 (in Billion U.S. Dollars)*, The Statistics Portal, (last visited Jan. 28, 2015), http://www.statista.com/statistics/190800/ebook-sales-revenue-forecast-for-the-us-market/; Neil Irwin, *E-Book Sales are Leveling Off. Here's Why.*, Wash. Post, Aug. 8, 2013, http://www.washingtonpost.com/blogs/wonkblog/wp/2013/08/08/e-book-sales-are-leveling-off-heres-why/.

[120] *See* Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, Section 1201 Hearing Agenda (June 5, 2012), http://www.copyright.gov/1201/hearings/2012/agenda/.

[121] Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 77 Fed. Reg. 65,260-01, 65,262 (Oct. 26, 2012).

[122] WIPO, *Summary of the Marrakesh Treaty* (2013), http://www.wipo.int/treaties/en/ip/marrakesh/summary_marrakesh.html.

[123] Marrakesh Treaty art. 7, June 27, 2013, World Intellectual Property Organization, *available at* http://www.wipo.int/treaties/en/text.jsp?file_id=301016#art7.

countries (including India, El Salvador, and the United Arab Emirates) are already implementing.[124]

* * *

For the foregoing reasons, the Librarian should renew the proposed exemption.

Respectfully submitted,

/s/

Mark Richert
Melanie Brunson
Jonathan Band
Blake E. Reid
Samantha Moodie
Melissa S. Jensen
James L. Frazier

8. *Documentary Evidence*

Appendix A: Affidavit from Susan Kelmer, Alternate Format Access Coordinator at the University of Colorado Boulder Disability Services Office

Appendix B: Letters to Current Congressional Representatives in Favor of The Technology, Education, and Accessibility in College and Higher Education Act

Appendix C: The EPUB3 Support Grid

Appendix D: Students with Disabilities Who May Require Alternate Format, Accessible Materials

Appendix E: The Accessibility of Hugo Award Winning Books Currently Available for Purchase on the Kindle Platform

Appendix F: The Accessibility of Pulitzer Prize Winning Books Currently Available for Purchase on the Kindle Platform

Appendix G: Available Formats of Top Ten Books in Amazon's "Politics and Current Events" Category

[124] *WIPO-Administered Treaties*, World Intellectual Property Organization, http://www.wipo.int/treaties/en/ShowResults.jsp?treaty_id=843 (last visited Feb. 2, 2015).

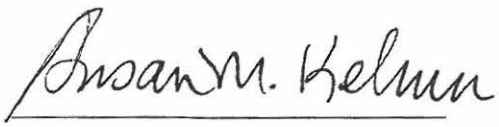
Affidavit from Susan Kelmer, Alternate Format Access Coordinator, Disability Services, University of Colorado Boulder

1. My name is Susan Kelmer. I am the Alternate Format Access Coordinator for the University of Colorado Boulder Disability Services Office. I swear and affirm that everything in this affidavit is true and accurate.
2. I provide accessible versions of textbooks and other required course materials to students with disabilities. I have been employed by the University of Colorado Boulder since 2011. I previously worked with St. Louis Community College in St. Louis, Missouri as Coordinator of Campus Labs and Classrooms and Alternate Format/Assistive Technology Specialist.
3. I provide approximately 90 students with more than 500 accessible textbooks each semester. During the Fall 2014 semester 92 students brought me 666 textbooks, which I converted into accessible formats for students approved for alternate format as an accommodation for their disability.
4. Students with disabilities who are enrolled at the University of Colorado Boulder can apply for accommodations for their disability through the Disability Service Office. Students must fill out an application and provide medical documentation verifying their disability. Students complete an intake with a Disability Access Coordinator, who works with them to determine any accommodations they may need.
5. Students approved for alternate format to accommodate their print disability are then referred to me. I consult with students about their needs and how best to accommodate them. Some students need their textbooks adapted into digital or physical Braille. Other students may need their textbooks adapted into high resolution PDFs that are compatible with text-to-speech programs, or converted to text-formatted files.
6. Once a student has registered for a course, they can gather information on the textbooks needed for their courses. They transmit this information to me, and I start the work of trying to acquire files from the publishers or other sources for those books. If files cannot be found, the student's copy of the book may be unbound and scanned to create the alternate format.
7. Files or tactile printouts are maintained in the AT Lab until such time as the student has provided proof of purchase for the books. No files can be legally transmitted to the student until they have purchased a hard copy of the books. Students are not required to purchase

their textbooks earlier than any other student, and students are not required to purchase their textbooks from any particular vendor. Students can purchase from the campus bookstore, Amazon.com or other online retailers, or from any other brick and mortar retailer.

8. Adapting a textbook into an accessible format can be a lengthy process, depending on the needed output, and the quality of original materials. Adapting a STEM textbook into an accessible format for a blind student, for example, can take hundreds of hours.
9. Publishers are not required to provide electronic files of their books to us upon request; however, many large publishers do provide electronic files for us to work with. These files generally come as accessible, text-based PDF files.
10. If we are unable to get electronic files from the publisher, we then ask the student to provide their textbook for cutting and scanning. Scanned files are made accessible and are text-based, edited to be sure all content is included, and then those files are transmitted to the student. Books that we cut are then re-bound and returned to the student. We are legally allowed to produce alternate format from hard copies of books for students with the approved accommodation of alternate format.
11. Occasionally, the only file we can get is a DRM-enabled electronic file. We are legally allowed to circumvent DRM to make a file accessible for a student with a print disability. I circumvent digital access restrictions on electronic files when there is no other way for me to make those files accessible to students. There are programs and websites that can be used to crack digital locks and passwords on files.
12. The University has the responsibility to provide students with print disabilities their alternate format as quickly as possible. Section 504 of the Vocational Rehabilitation Act of 1973 forbids discrimination against people with disabilities by any organization that receives federal funding. The University of Colorado receives federal funding. Providing alternate format for students with print disabilities puts them on a level footing with other students, and providing those materials quickly and accurately is critical to their success.
13. I could not adapt textbooks for my students as quickly and efficiently as I do today if I were not allowed to circumvent digital access restrictions. My students and I will suffer several harms if the Librarian of Congress refuses to renew this exemption.

14. First, I won't be able to adapt eBooks into accessible formats without the consent of publishers. If publishers withhold their consent, as some of them already do, students will have to buy a second, print copy of their book so that I can make it accessible.
15. Second, students will be forced to purchase the more expensive hard copy version of every textbook. EBooks are generally cheaper than hard copies of textbooks. However, the overwhelming majority of eBook websites don't indicate to consumers whether the eBooks on the site contain digital access restrictions. If a student purchased an eBook that turned out to be contain digital access restriction, I would be unable to provide an accessible copy without this exemption in place.
16. Finally, hard copies of textbooks take longer to adapt into accessible versions than eBooks. Students will get their books days or weeks later if I have to allocate all of my lab's resources to manually adapting hard copies of textbooks into accessible formats. This delay would put students with disabilities at a severe disadvantage to their non-disabled classmates who have immediate access to usable versions of their textbooks.
17. I value my students enormously. And I am glad that I can help them participate in the college experience in the same way as non-disabled students. It is wonderful that so many publishers are supportive of accessibility for students with disabilities. Our lab has a great relationship with many publishers, and we appreciate the help that they give our students. Their help is what gives our students the opportunity succeed.



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Appendix B: Letters to Current Congressional Representatives in Favor of The Technology, Education, and Accessibility in College and Higher Education Act

The Technology, Education, and Accessibility in College and Higher Education (TEACH) Act, is currently pending legislation that "addresses the problem of inaccessible instructional materials in post-secondary education."[1] Unfortunately, "the overwhelming majority of university websites, digital books, PDFs, learning management systems, lab software, and online research journal are inaccessible to students with print disabilities," despite federal law mandating equal access.[2]

The Inability to Circumvent TPM on eBooks, PDFs, and other digital files Adversely Effects College Students who are Blind, Visually Impaired, and Print Disabled. The following are excerpts of letters from students to their Congressmen concerning the TEACH Act. The letters demonstrate problems experienced by students who are blind, visually impaired, and print disabled with electronic textbooks and PDFs of scholarly articles. These students do not explain their issues in terms of TPMs; however, it is clear that accessibility software is prevented from working in many cases by the indiscriminate usage of TPMs on both e-textbooks and PDFs. These excerpts were collected and provided by the National Federation of the Blind.

"Databases including Academic One File are particularly frustrating to utilize as the pdf versions are made not to be screen readable and the HTML versions are screen readable but not formatted in the same way for citation purposes as the pdf documents which makes utilizing these journal articles for research extremely difficult. Last, although textbooks can be less expensive to purchase in electronic format, these books are not screen readable and, therefore, are not accessible to students on a budget. We then must buy the paper format and have it created in an accessible format if the publisher does not provide the book to the University disability services office."

- Student at the University of Denver

"Once we got into the course, it became clear that I would need to use a course management software known as Blackboard and a textbook companion website produced by the textbook publisher. Both of these were inaccessible to me as a blind student. This meant that I simply could not use them."

- Student at Southern Connecticut State University

"I was disappointed to learn about the accessibility problems concerning e-books available through the university library. Before I was able to access these books through this system, I first had to create an account that I would not have otherwise needed to create, and then I was

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[1] Lauren McLarney, *About the TEACH Act,* National Federation of the Blind, https://nfb.org/TEACH (last visited Feb. 4, 2015).

[2] *Id.*

required to contact the library to enable accessibility features on that account. Consequently, I was forced to request an extension to the due date of my paper because I would not have been able to finish it on time, only because I had to wait several days to access a book I should have been able to read immediately. Furthermore, the iOS app that provides access to these materials does not work with VoiceOver, the screen reader built in to Apple products, so using my iPhone was not an option for me."

- Student at University of Illinois at Chicago

"During my time at college, I have experienced a number of obstacles related to educational technology. The most frustrating problem has been inaccessible online textbooks. When I get textbooks, I have to wait for alternative formatting from my disability coordinator at the university which can often lead to delays in my ability to do my nightly reading. Another issue has been that I can only use magnification software rather than screen readers such as JAWS on our school's class webpage, Canvass. I'm lucky in that I have partial vision that can allow me to overcome these obstacles for the most part. Others are not so lucky."

- Student at Salem State University

"A lot of professors encouraged and often required their students to use scholarly articles and journals to do research. I liked the concept of an online library database, because I assumed that such material would be accessible to me simply because it was available electronically. I was incorrect in this assumption, however, because much of the material I needed to access was in inaccessible PDFs. This made the process of doing research for a paper or project even more daunting."

- Student at New Hampshire University

"They were able to get my textbooks in PDF format but they were not compatible with my Zoom Text which is the assistive technology I use."

- Student at Meredith College

"I would like for those who are reading this to imagine that they were in the classroom without the textbook and the Professor instructed you that the first exam is on Chapter 1. Imagine how frantic and nervous you would be. Now I ask you to imagine this scenario: imagine you are a blind student in the same situation and that you have the textbook in a non-accessible format. There is no real difference in these types of situations, and the latter situation presents a problem that is happening in the United States. Blind students seeking an education are running into the issue that their textbooks are not accessible; they cannot access their course materials and therefore cannot function alongside their sighted peers in the classroom."

- Student at University of Texas, Austin

"When electronic versions of textbooks are distributed, they are often unusable and unreadable even when basic usability standards are nominally in place."

- Student at Utah State University

"Like any student, I've encountered PDF documents almost daily throughout my education. It's often assumed that these can always be read by screen reading software. The reality is that not all PDF's are created equal. While I occasionally encounter a publisher that has produced a beautifully formatted document with well-annotated formatting and rich descriptions of figures and images, this is rare. More often, these documents are poorly annotated, with little or no description of images or format. In the worst cases, the PDF is simply a large image with no text data at all. A screen reader is utterly useless in these situations. Even attempts to extract text from such documents using optical character recognition software are often hampered by poor image quality. In short, adaptive software is not a silver bullet."

- Student at University of Wisconsin, Madison

"I cannot count how many times I have had to waste time trying to find accessible versions of reading materials for classes, or just skipped readings altogether because there was no good way for me to access that material. Reading research articles is crucial to my success as a graduate student, and the inaccessibility of some documents definitely slows my progress at times."

- Student at University of Wisconsin, Madison

Appendix C: The EPUB 3 Support Grid

The publishing industry's stated commitment to expanding the availability of accessible literary works does not guarantee that literary works are accessible. The Association of American Publishers' EPUB 3 Implementation Project White Paper demonstrates the publishing industry's commitment to expanding access to literary works by people with print disabilities.[1] However, having an accessible standard like EPUB3 does not mean that e-book publishers are facing an accessible requirement. Many eBooks, even those published under the EPUB format, are not accessible.

EPUBTest evaluates EPUB-compatible reading systems for accessibility.[2] "The basic assumption of accessibility evaluation is that all reading systems should support reading with eyes, ears, and fingers."[3] The Testsuite allows independent evaluators to perform "a rigorous performance evaluation of the most commonly used and most essential features of EPUB 3.0."[4] The test is conducted "by industry experts representing leading publishers, service providers, and technology vendors"[5]

The Testsuite was designed by the IDPF, and is maintained through a partnership among IDPF, the Daisy Consortium, and the Book Industry Study Group.[6] Results of testing through the Testsuite is made available on the EPUB 3 Support Grid.[7] Scores on the Grid "are calculated as a percentage of tests passed divided by the total number of tests."[8] Thus, scores on the Grid represent the percentage of e-books in the EPUB3 format which were accessible on each platform.

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[1] American Association of Publishers, AAP EPUB 3 Implementation Project Oct. 28, 2013 available at http://publishers.org/press/117/

[2] *EPUBTest: About the Test Suite,* EPUBTest, http://epubtest.org/about/.

[3] Instructions for Accessibility Evaluation of Reading Systems. http://epubtest.org/testsuite/

[4] EPUBTest, *supra*.

[5] *Id*.

[6] *Id.*

[7] *BISG EPUB 3 Support Grid: Current Results*, EPUB Test, http://epubtest.org/results/ (data shown current as of Jan.30, 2015).

[8] http://epubtest.org/about/#support-grid

BISG EPUB 3 SUPPORT GRID: Current Results as of Feb. 4, 2015[9]

Platform	Version	Total	Required Features	Optional Features
Apple iPad	iBooks 3.2	60.9%	71.3%	44.9%
Kindle Fire	HD 8.9	36.1%	52.1%	11.2%
Kindle for PC		31.8%	47.9	6.5%
Nook for iOS	3.4.4.13	12.8%	19.2	2.8
Sony Reader	On iOS	21.5%	32.9	3.7
Kindle for iPhone	iOS 7.0.4	9.5%	11.4	6.5
Kindle for iPad	iOS 7.0.4	13.1%	16.8	7.5
Nook HD 2.1		13.5%	21	1.9
Kindle Paperwhite	5.3.3	27%	42.5	2.8
Kindle Fire HDX	13.3.2.2	28.1%	43.1	4.7
Kindle Fire HDX	13.3.2.2	28.1%	43.1	4.7
Kobo Android App	5.4	49.3%	61.7	29.9
Kobo iOS	7.3	66.4%	76	51.4
Kobo Desktop	3.8	58%	76.6	29

[9] EPUBTest, *supra*.

Appendix D: Students with Disabilities Who May Require Alternate Format, Accessible Materials

Group	Student Count	Source
Number of Children – Age 3-21	**77,927,000**	U.S. Census Bureau, Current Population Survey, October 2009. http://www.census.gov/population/www/socdemo/school/cps2009.html
Number of Students – Age 3-21	**65,693,000**	U.S. Census Bureau, Current Population Survey, October 2009. http://www.census.gov/population/www/socdemo/school/cps2009.html
Students w/ Identified Disabilities	6,613,989	Retrieved 2/11/11 & 2/18/11 from Data Accountability Center DAC https://www.ideadata.org/DACAnalyticTool/Intro_2.asp
Students w/ IEPs and Service Plans	6,367,014	Institute for Education Science National Center for Education Statistics Common Core of Data http://nces.ed.gov/ccd/
Students w/ Section 504 plans	444,035	Civil Rights Data Collection http://ocrdata.ed.gov/Default.aspx
Students w/ Learning Disabilities	2,500,623	DAC https://www.ideadata.org/DACAnalyticTool/Intro_2.asp
Reading related LD	2,000,498	NCLD, informal communication, March 14, 2011; NCEO, informal communication, March 30, 2011
Students w/ Visual Impairments (including MD with VI)	80,978-122,956	DAC https://www.ideadata.org/DACAnalyticTool/Intro_2.asp; Kirchner & Diament (1999); J. Erin (personal communication, March 18, 2011). Note that Kirchner & Diament estimates are birth- 21. Note that visually impaired students from IDEA multiple disability category are included in this estimate. Kirchner & Diament (1999); J. Erin (personal communication, March 18, 2011)
Blind	4,688-6,525	DAC https://www.ideadata.org/DACAnalyticTool/Intro_2.asp and From the Special Education Elementary Longitudinal Study. These rates are based on a sample of 8- to 15-year-old students receiving special education services under the IDEA category "visual impairment including blindness Retrieved from: http://www.seels.net/designdocs/SEELS_VI_report_final.pdf; Kirchner & Diament (1999); J. Erin (personal communication, March 18, 2011)
Low Vision	24,609-36,975	DAC https://www.ideadata.org/DACAnalyticTool/Intro_2.asp and Same as the category for Blind just above; Kirchner & Diament (1999); J. Erin (personal communication, March 18, 2011)
Deaf/Blind	1,581-10,800	DAC https://www.ideadata.org/DACAnalyticTool/Intro_2.asp; Kirchner & Diament (1999)
Multiple Disabilities & VI	50,100	Kirchner & Diament (1999)
Students w/ Physical	65,615	DAC https://www.ideadata.org/DACAnalyticTool/Intro_2.asp

NFB, *Students with Disabilities Who May Require Alternate Format, Accessible Materials,* National Federation of the Blind, *available at https://nfb.org/images/nfb/documents/word/statisticsteach.docx*

Disabilities		
Unable to hold book, turn pages	52,230	DAC https://www.ideadata.org/DACAnalyticTool/Intro_2.asp and From "Disability Profiles of Elementary and Middle School Students with Disabilities," Special Education Elementary Longitudinal Study http://www.seels.net/designdocs/SEELS_disability_profile.pdf
Other Health Impairments	698,521	DAC https://www.ideadata.org/DACAnalyticTool/Intro_2.asp
Students w/ Multiple Disabilities (except visually impaired)	52,971-82,327	DAC https://www.ideadata.org/DACAnalyticTool/Intro_2.asp Note that this category excludes students with visual impairment. It has been suggested that all students with multiple disabilities are likely to have a reading related disability. M. Thurlow (personal communication, March 30, 2011)

*Pink are the Chafee numbers (probably).

**Green blocks are subs of a main AIM category, just info or used to calculated non-copyright exempted students.

Summary

Note that this a conservative estimate because of the fact that we used the means of categories with ranges, and data collection procedures for all categories could be improved to gain a more accurate understanding of students in the respective categories.

Vision related: **101,967**

Physical/Health related: **119,879**

LD Reading related: **2,026,485**

TOTAL: **2,261,716 (3.4% of students aged 3-21)**

Number of others who may benefit from AIM but do not qualify for a copyright exemption: **4,023,723**. This total includes students with 504 plans, as well as the entirety of students with physical disabilities, and mean of the estimate of students with ADHD with reading disabilities. In the future, students who have demonstrated "below basic" proficiency (25% of students) as measured by the NAEP may benefit from AIM.

With Section 504 Plans: **444,035**

Other: **3,579,688**

TOTAL: **4,023,723**

Appendix E: The Accessibility of Hugo Award Winning Books Currently Available for Purchase on the Kindle Platform

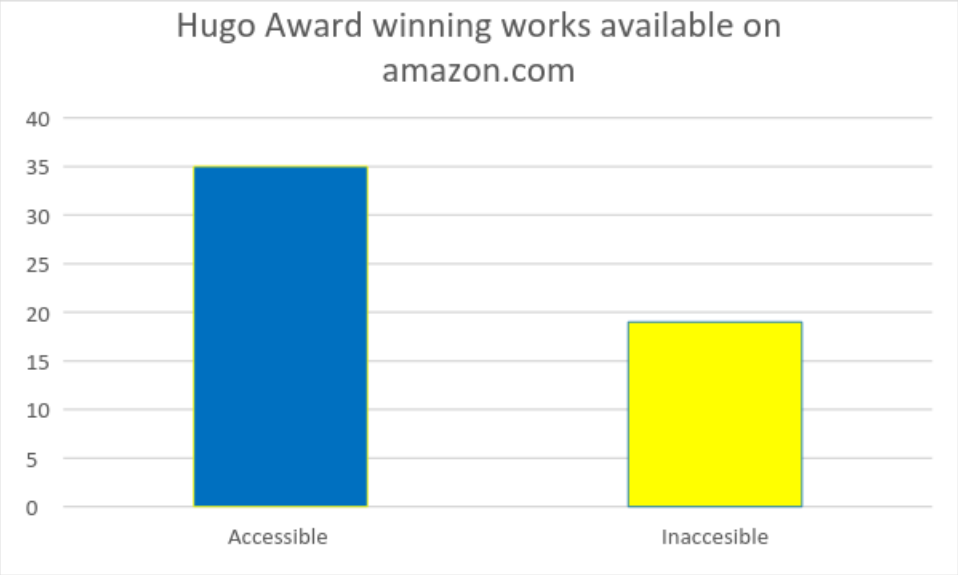

Figure 1: Number of Accessible v. Inaccessible Hugo Award winning novels available on amazon.com. "Accessible" defined as available in eBook format with text-to-speech enabled.

Data

Year	Title	Text-To-Speech (TTS) Availability
2014	Ancillary Justice	TTS enabled
2013	Redshirts	TTS enabled
2012	Among Others	TTS enabled
2011	Blackout/All Clear	TTS enabled
2010 (tie)	The Windup Girl	TTS enabled
2010 (tie)	The City & the city	TTS not enabled
2009	The Graveyard Book	TTs enabled
2008	The Yiddish Policeman's Union	TTS enabled
2007	Rainbows End	TTS enabled
2006	Spin	TTS enabled in 2/3 of volume
2005	Jonathan Strange and Mr. Norrell	TTS not enabled

2004	Paladin of Souls	TTS enabled
2003	Hominids	TTS enabled
2002	American Gods	TTS enabled
2001	Harry Potter and the Goblet of Fire	TTS enabled
2000	A Deepness in the Sky	TTS enabled
1999	To Say Nothing of the Dog	TTS not enabled
1998	Forever Peace	Not available in eBook
1997	Blue Mars	TTS not enabled
1996	The Diamond Age	TTS not enabled
1995	Mirror Dance	TTS enabled
1994	Green Mars	TTS not enabled
1993 (tie)	A Fire Upon the Deep	TTS enabled
1993 (tie	Doomsday Book	TTS enabled
1992	Barrayar	TTs enabled
1991	The Vor Game	TTS enabled
1990	Hyperion	TTS enabled
1989	Cyteen	Not available in eBook
1988	The Uplift War	TTS not enabled
1987	Speaker for the Dead	TTS enabled
1986	Ender's Game	TTS enabled
1985	Neuromancer	TTS enabled
1984	Startide Rising	TTS not enabled
1983	Fountain's Edge	TTS not enabled
1982	Downbelow Station	TTS enabled
1981	The Snow Queen	Not available in eBook
1980	The Fountains of Paradise	TTS enabled
1979	Dreamsnake	Not available in eBook
1978	Gateway	TTS enabled
1977	Where Late the Sweet Birds Sang	TTS enabled
1976	The Forever War	TTS enabled
1975	The Dispossessed	TTS enabled
1974	Rendezvous with Rama	TTS enabled
1973	The Gods Themselves	TTS enabled
1972	To Your Scattered Bodies Go	TTS enabled
1971	Ringworld	TS not enabled
1970	The Left Hand of Darkness	Not available in eBook

1969	Stand on Zanzibar	TTS enabled
1968	Lord of Light	Not available in eBook
1967	The Moon is a Harsh Mistress	Not available in eBook
1966 (tie)	Dune	TTS enabled
1966 (tie)	…And Call Me Conrad (This Immortal)	TTS enabled
1965	The Wanderer	TTS enabled
1964	Here Gather the Stars (Way Station)	TTS enabled
Total unavailable in TTS/eBook: 18/54; 33.33%		

Year	Title	Text-To-Speech (TTS) Availability
2014	Ancillary Justice	TTS enabled
2013	Redshirts	TTS enabled
2012	Among Others	TTS enabled
2011	Blackout/All Clear	TTS enabled
2010 (tie)	The Windup Girl	TTS enabled
2010 (tie)	The City & the city	TTS not enabled
2009	The Graveyard Book	TTs enabled
2008	The Yiddish Policeman's Union	TTS enabled
2007	Rainbows End	TTS enabled
2006	Spin	TTS enabled in 2/3 of volume
2005	Jonathan Strange and Mr. Norrell	TTS not enabled
2004	Paladin of Souls	TTS enabled
2003	Hominids	TTS enabled
2002	American Gods	TTS enabled
2001	Harry Potter and the Goblet of Fire	TTS enabled
2000	A Deepness in the Sky	TTS enabled
1999	To Say Nothing of the Dog	TTS not enabled
1998	Forever Peace	Not available in eBook
1997	Blue Mars	TTS not enabled
1996	The Diamond Age	TTS not enabled
1995	Mirror Dance	TTS enabled
1994	Green Mars	TTS not enabled
1993 (tie)	A Fire Upon the Deep	TTS enabled

1993 (tie	Doomsday Book	TTS enabled
1992	Barrayar	TTs enabled
1991	The Vor Game	TTS enabled
1990	Hyperion	TTS enabled
1989	Cyteen	Not available in eBook
1988	The Uplift War	TTS not enabled
1987	Speaker for the Dead	TTS enabled
1986	Ender's Game	TTS enabled
1985	Neuromancer	TTS enabled
1984	Startide Rising	TTS not enabled
1983	Fountain's Edge	TTS not enabled
1982	Downbelow Station	TTS enabled
1981	The Snow Queen	Not available in eBook
1980	The Fountains of Paradise	TTS enabled
1979	Dreamsnake	Not available in eBook
1978	Gateway	TTS enabled
1977	Where Late the Sweet Birds Sang	TTS enabled
1976	The Forever War	TTS enabled
1975	The Dispossessed	TTS enabled
1974	Rendezvous with Rama	TTS enabled
1973	The Gods Themselves	TTS enabled
1972	To Your Scattered Bodies Go	TTS enabled
1971	Ringworld	TS not enabled
1970	The Left Hand of Darkness	Not available in eBook
1969	Stand on Zanzibar	TTS enabled
1968	Lord of Light	Not available in eBook
1967	The Moon is a Harsh Mistress	Not available in eBook
1966 (tie)	Dune	TTS enabled
1966 (tie)	…And Call Me Conrad (This Immortal)	TTS enabled
1965	The Wanderer	TTS enabled
1964	Here Gather the Stars (Way Station)	TTS enabled
Total unavailable in TTS/eBook: 18/54; 33.33%		

Appendix F: The Accessibility of Pulitzer Prize Winning Books Currently Available for Purchase on the Kindle Platform

Figure 2: Number of Accessible v. Inaccessible Pulitzer Prize winning works available on amazon.com. "Accessible" defined as available in eBook format with text-to-speech enabled.

Data

Year	Title	Text-To-Speech (TTS) Availability
2014	The Goldfinch	TTS enabled
2013	The Orphan Master's Son	TTS enabled
2012	*(no award)*	
2011	A Visit from the Goon Squad	TTS not enabled
2010	Tinkers	TTS enabled
2009	Olive Kitteridge	TTS not enabled
2008	The Brief and Wondrous Life of Oscar Wao	TTs enabled
2007	The Road	TTS not enabled
2006	March	TTS enabled
2005	Gilead	TTS enabled
2004	The Known World	TTS enabled

2003	Middlesex	TTS enabled
2002	Empire Falls	TTS enabled
2001	The Amazing Adventures of Kavalier and Clay	TTS enabled
2000	Interpreter of Maladies	TTS not enabled
1999	The Hours	TTS enabled
1998	American Pastoral	TTS enabled
1997	Martin Dressler: The Tale of the American Dreamer	TTS enabled
1996	Independence Day	TTS enabled
1995	The Stone Diaries	TTS enabled
1994	The Shipping News	TTS not enabled
1993	A Good Scent from a Strange Mountain	TTS enabled
1992	A Thousand Acres	TTS enabled
1991	Rabbit at Rest	TTS enabled
1990	The Mambo Kings Play Songs of Love	TTs enabled
1989	Breathing Lessons	TTS enabled
1988	Beloved	TTS not enabled
1987	A Summons to Memphis	Not available in eBook
1986	Lonesome Dove	TTS enabled
1985	Foreign Affairs	TTS enabled
1984	Ironweed	Not available in eBook
1983	The Color Purple	TTS enabled
1982	Rabbit is Rich	TTS enabled
1981	A Confederacy of Dunces	TTS enabled
1980	The Executioner's Song	TTS enabled
1979	The Stories of John Cheever	TTS enabled
1978	Elbow Room	Not available in eBook
1977	*(no award)*	
1976	Humboldt's Gift	Not available in eBook
1975	The Killer Angels	TTS enabled
1974	*(no award)*	
1973	The Optimist's Daughter	TTS not enabled
1972	Angle of Repose	Not available in eBook
1971	*(no award)*	
1970	Collected Stories	Not available in eBook
1969	House Made of Dawn	TTS enabled

1968	The Confessions of Nat Turner	TTS enabled
1967	The Fixer	TTS enabled
1966	Collected Stories	TTS enabled
1965	The Keepers of the House	TTS enabled
1964	*(no award)*	
Total unavailable in TTS/eBook (excluding years without an award): 13/46; 28.26%		

Appendix G: List of the top ten best selling books featured on amazon.com's "Politics & Current Events" section as of January 27, 2014. This table indicates the prices of those books in hard-cover, ebook, and audible.com audio format.

Title	Hardcover Price (USD)	ebook Price USD	Audible.com Price USD
Zero to One: Notes on Startups, or How to Build the Future	16.20	11.84	17.99
The Tipping Point: How Little Things Can Make a Big Difference	18.85	8.89	23.95
America's Bitter Pill	20.33	10.99	29.95
Chasing the Scream	16.20	9.99	25.95
Capital in the Twenty First Century	29.67	21.99	34.95
A People's History of the United States	28.47	Not Available	60.95
Never Give In	Not Available	Not Available	16.95
God, Guns, Grits and Gravy	14.84	12.99	17.95
The Looming Tower	23.48	8.99	23.95